

**WHAT IS CLAIMED IS:**

1. An x-ray film cassette comprising:  
a primary molded screenside and tubeside plastic panels, each of said panels having a front side, a pair of lateral sides and a back side, the back side of the tubeside panel forming an integrally molded upstanding back wall terminating in a top edge; and  
a secondary molded framework comprising first and second frames, each of said frames having border segments molded, respectively, to at least the lateral and back sides of each of the screenside and tubeside panels, the back side border segment of the tubeside panel being molded to the top edge of said back wall, said framework including an integrally molded living hinge segment joining the back side border segment of the screenside panel to the back side border segment of the tubeside panel along the top edge of said back wall.
2. The cassette of claim 1, further including a resilient layer secured to the inside face of the screenside panel and an intensifying screen secured to face of the resilient layer such that upon closure of the screenside panel, with film loaded in the cassette, the intensifying screen comes into uniform surface contact with the film and also aligns itself to the film at the chest wall of the tubeside panel.
3. The cassette of claim 1, wherein said backwall has a rear external surface and said top edge is offset forwardly of said back wall rear external surface and said back side border segment of the tubeside panel is molded on said top edge with a rear external surface that is at or forward of the rear external surface of the tube side back wall.
4. The cassette of claim 1, wherein the lateral and backside border segments of the tubeside panel terminate in a pair of upstanding generally rectangular integrally molded corner posts;

the backside border segment of the tubeside panel having slanted slots formed at each end thereof at the respective points of juncture with the upstanding corner posts; and

the backside border segment of the screenside panel having projecting ridges formed at opposite ends thereof adapted to mate with said grooves upon closure of the panels such that a light tight seal is thereby formed at each end of said hinge to prevent unwanted exposure of film loaded into the cassette.

5. The cassette of claim 1, wherein said tubeside panel includes upstanding side walls defining a film compartment, the side walls each having a recess formed at the back thereof adjacent said hinge, the cassette further including a cam tab on the backside border segment of the screenside panel and positioned such that, upon closure, the cam tabs interact with mating surfaces of the recesses to positively align rear edge of the intensifying screen along the tubeside back wall, thereby bringing it into alignment with the film already at the same location.

6. The cassette of claim 1, wherein said lateral border segments are shaped in cross section to provide a labyrinth light shield along lateral sides of the cassette.

7. The cassette of claim 6, wherein each pair of facing lateral border segments comprise a pair of elongated ridges forming a groove therebetween on one of the border segments and an elongated mating ridge positioned on the on the other of said facing segments to fit the said groove so as to create said labyrinth light shield.

8. The cassette of claim 1, including a locating feature comprising a locating tab formed on at least one of said lateral side segments and a mating locating notch formed in a lateral side segment facing said locating tab.

9. The cassette of claim 8, wherein said locating tab, in cross section, has a truncated pyramid shape and said locating notch has mating sloping edge surfaces to engage corresponding sloping side surfaces of said locating tab.

10. The cassette of claim 9, wherein said locating tab has a predetermined height and said locating notch has a predetermined depth, said height being shorter than said depth.

11. The cassette of claim 7, further including a locating feature comprising a locating tab formed in said groove and a mating locating notch formed in said elongated mating ridge

12. The cassette of claim 11, wherein said locating tab, in cross section, has a truncated pyramid shape and said locating notch has mating sloping edge surfaces to engage corresponding sloping side surfaces of said locating tab.

13. The cassette of claim 12, wherein said locating tab has a predetermined height and said locating notch has a predetermined depth, said height being shorter than said depth.

14. The cassette of claim 1, wherein said panels are comprised of a thermoplastic material and said molded framework comprises a thermoset material.

15. The cassette of claim 14, wherein said thermoplastic material is polycarbonate and said thermoset material is polyurethane.